

REMARKS

The Non-Final Office Action ("Office Action") mailed August 24, 2005 has been received and its contents carefully analyzed. By this Amendment, the specification is amended to more clearly describe the invention and correct certain typographical errors. Claim 1 is amended to more clearly describe the invention, and claim 5 is amended to correct a certain grammatical error. Upon entry of the above Amendment, claims 1-14 will be pending, of which claims 1 and 5 are independent claims. Applicants respectfully submit that the above amendments do not add new matter and are fully supported by the specification.

Reconsideration and withdrawal of all pending objections and rejections in view of the above amendments and following remarks is respectfully requested.

Examiner's Suggestions

At page 2 of the Office Action, the Examiner suggests:

...providing more details [sic] information about the type of images (2D or 3D or both); limitations of min and max size of the panel display, e.g., if a person skill [sic] in the art has a display size of 1 by 1 inch, how can he display the real size of an apple with at least 2 inches diameter? Or he does not display the real size image, instead displays just the information data e.g. distance, color, length, width and etc., for the object; the process of image converter is not well defined; Is the first image considered as an object?

In reply, Applicants answer as follows:

a) Types of Images: At least Figure 1, Figure 2, and Figure 4 illustrate a three-dimensional subject. The object/subject recited in independent claims 1 and 5, however, is not limited thereto.

b) Size of LCD: The dimensions of an LCD in comparison with the dimensions of a real size image of an object that may be displayed on the LCD is irrelevant, because an image converter, using dot size information received from/about a particular LCD, causes a real

size image of the object to be displayed on the LCD. For example, as stated at pages 4-5 of the Specification:

The image size converter performs an identical function of improved clock converting, expansion, data reduction, pixel fitting, etc., and then transmits data to a flat panel display panel. Pixel fitting involves the conversion of a pixel size of the flat panel display panel and an actual scan width of a camera scan pulse to correspond to these two parameters.

.... to obtain the display in actual size on an LCD panel, the above processes of using a converting algorithm and pixel fitting must be performed.

Thus, for LCD's having dimensions larger than the real size image, all of the real size image may be viewable at one time. On the other hand, for LCD's having dimensions smaller than the real size image to be displayed, only a portion of the real size image may be viewable at one time, and the LCD may incorporate a scrolling mechanism that allows a user to view other portions of the real size image. Such displays are well known to one of ordinary skill in the art. Consequently, whether the dimensions of the LCD are larger or smaller than the dimensions of the real size image is irrelevant.

Additionally, the Examiner is respectfully referred to at least Figure 5 and to pages 5-7 of the Specification for a detailed description of how the image size converter operates.

c) First Image: Claim 1 recites, *inter alia*, "...an image converter receives first image information..." From at least Figure 4 and description at page 4 of the specification, it may be understood that the "first image information" relates to, but is different from, the subject/object being photographed/scanned. For example, in Figure 4, the object being photographed is an apple. The "first image information" is at least photographic and/or measurement information about the object (i.e., apple) that a photographic device (such as a camera) captures during the picture-taking process. As stated at page 2 of the specification:

....the first image information includes magnification, horizontal synchronization signal, vertical synchronization signal, clock, and measured distance data.

The "first image information" is thus descriptive of the object in that the "first image information", when properly processed by a computer and/or image converter, can be used to cause a real size picture of the object to appear on a liquid crystal (or other type of) display. Thus, to clearly answer the Examiner's question, the "first image information" should not be considered as an "object".

35 U.S.C. § 103 Rejection

Claims 1-14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U. S. Patent No. 5,967,968 to Nishioka, *et al.* ("Nishioka") in view of U. S. Patent Application Publication No.: 2002/0037489 to Jones, *et al.* ("Jones"). This rejection is respectfully traversed.

Claims 1 and 5 each recite, among other things:

....wherein the first image information is converted into the second image information based on the dot size information received from the flat panel display unit.

Nothing in the cited references discloses at least this claimed feature. For example, in direct contrast to this claimed feature, Nishioka discloses:

generating an image of the object using an instrument; extending a probe having a series of unevenly spaced graduations from the instrument to the object; identifying the graduation on the probe visible in the image nearest to the instrument; and scaling the image viewed by the endoscope by a size factor corresponding to the identified graduation. (*Emphasis Added*. See Abstract and Figures 1, 2A, 2B, and 4).

Additionally, Jones discloses:

Many of these automated segmentation techniques are even more useful and efficient when used in conjunction with human-assisted techniques. For example, techniques that rely on the identification

of the interproximal or gingival margins function more quickly and effectively when a human user first highlights the interproximal or gingival cusps in an image of the definition model. One technique for receiving this type of information from the user is by displaying a 2D or 3D representation and allowing the user to highlight individual voxels in the display. (*Emphasis Added.* See paragraph 91).

Noting at page 3 of the Office Action that Nishioka does not disclose the claimed feature referenced above, the Examiner alleges it would have been obvious to modify the graduated probe teachings of Nishioka with the user-highlighted voxel teachings of Jones, but fails to state what the result of such a combination would be. (See Office Action, page 3). Instead, the Examiner digresses into commentary about voxels and two-dimensional images, stating:

...a voxel is a volume element, representing a colour [sic] value in three dimensional space, i.e., analagous to a pixel, which represents 2D image data. Both references cover at least 2-dimensional image [sic], and Applicant does not specify the type of image in the claim [sic] invention. *Id.*

The Examiner further asserts, without proof:

It would have been obvious to an ordinary person in the art to recognize the actual measurement of the object must be incorporated with a plurality of pixels or dots on the screen. *Id.*

These statements show that the Examiner does not fully appreciate how the claimed invention operates, and has made an improper hindsight reconstruction of the invention through piecemeal prior art teachings. For example, these statements fail to establish a *prima facie* case of obviousness, not only because they combine two dissimilar references, but also because they fail to state what result the alleged combination would produce. Additionally, these statements fail to identify areas of the references themselves or specific examples illustrative of the knowledge available to a skilled artisan at the time the invention was made that would provide a motivation to combine the references' teachings.

In addition, claim 1 recites that "the first image information includes measurement information on an actual size of the object." However, according to Figures 2A and 2B of

Nishioka, as described at col. 4, lines 16-23, a measurement grid is displayed to measure the actual size of objects. Thus, Nishioka does not disclose a real size display system.

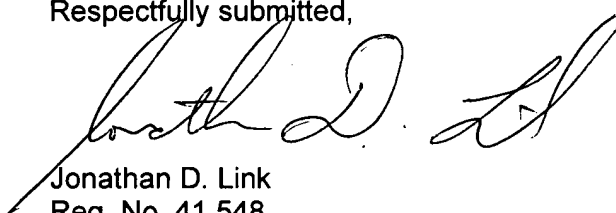
Therefore, for at least these reasons, independent base claims 1 and 5 are allowable over the combination of cited references. Claims 2-4 are also allowable at least by virtue of their respective dependencies on allowable base claim 1, as well as for their added features. Claims 6-14 are also allowable at least by virtue of their respective dependencies on allowable base claim 5, as well as for their added features. Therefore, the Examiner is respectfully requested to withdraw the rejection of claims 1-14 and to pass claims 1-14 to allowance and issue.

CONCLUSIONS

Applicants submit that a full and complete response has been made to the pending Office Action and respectfully submit that all of the stated objections and/or grounds for rejection have been overcome or rendered moot. Accordingly, Applicants respectfully submit that all pending claims are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is thus respectfully requested to pass the above application to issue.

Should the Examiner feel that there are any issues outstanding after consideration of this Amendment, the Examiner is invited to contact the Applicants' undersigned representative at the number below to expedite prosecution. Prompt and favorable consideration of this Amendment is respectfully requested. Applicants respectfully request that a timely Notice of Allowance be issued for this application.

Respectfully submitted,



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